FIG. 1

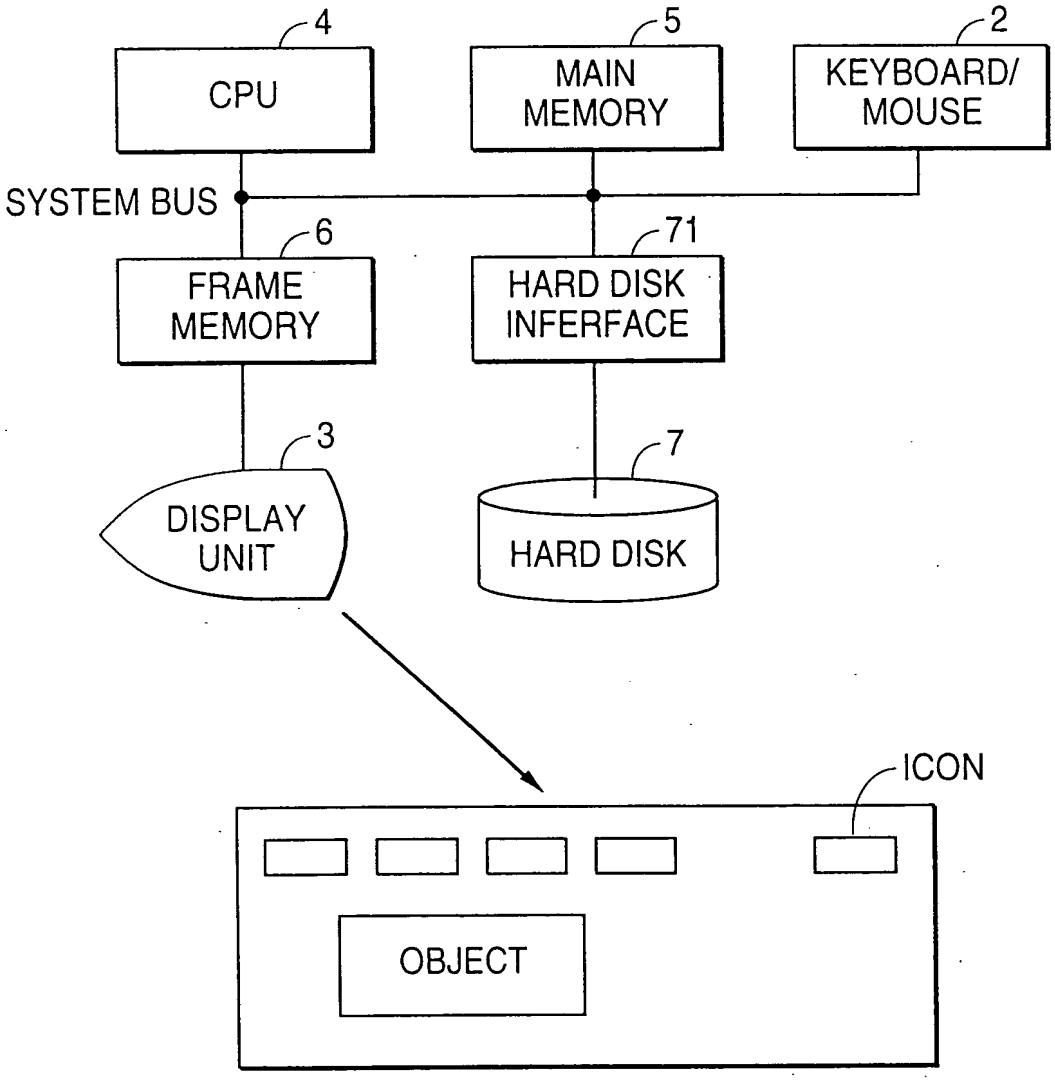
4
CPU
5
MAIN MEMORY
2
KEYBOARD/ MOUSE
SYSTEM BUS
6
FRAME MEMORY
71
HARD DISK INFERFACE
3
DISPLAY UNIT
7
HARD DISK
ICON
OBJECT

FIG. 2

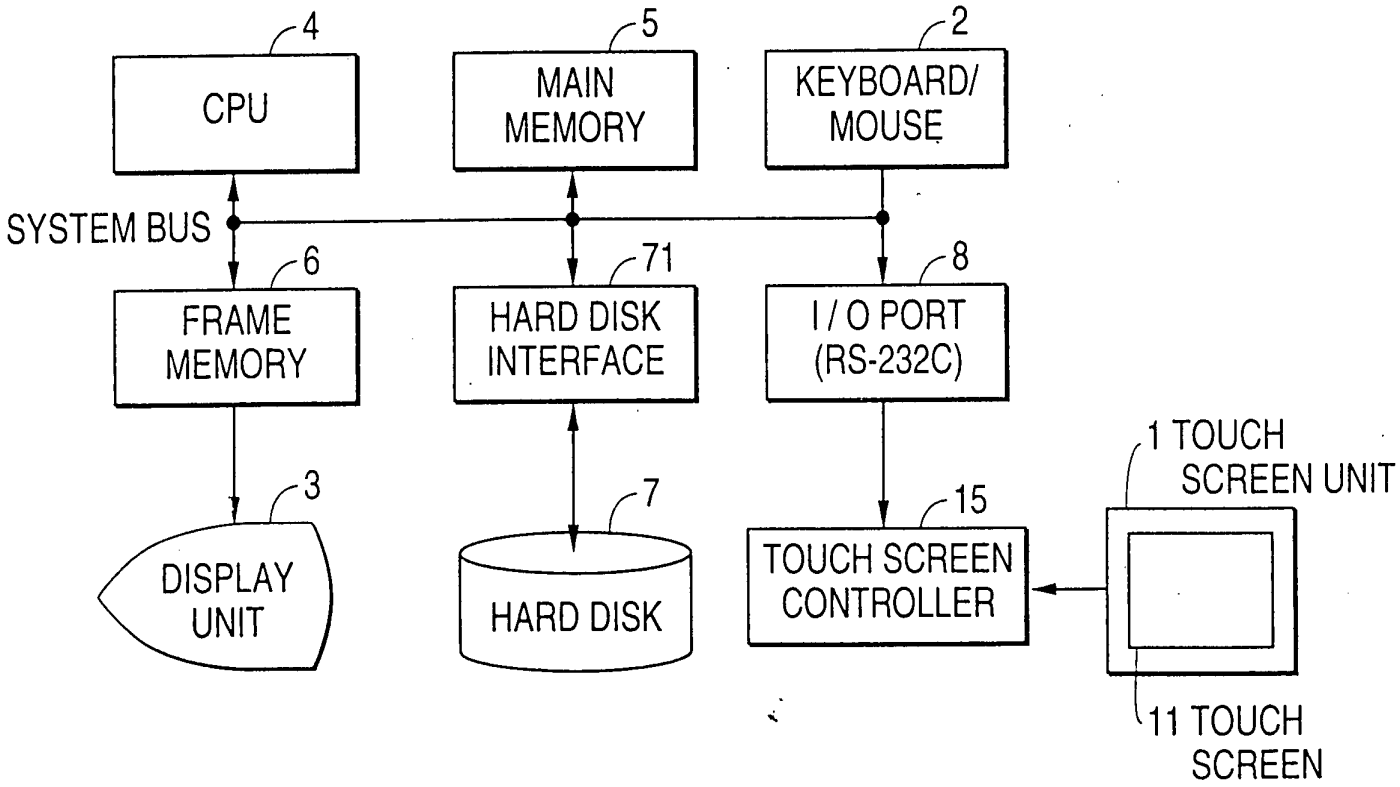
4
CPU
5
MAIN MEMORY
2
KEYBOARD/ MOUSE
SYSTEM BUS
6
FRAME MEMORY
71
HARD DISK INTERFACE
8
I / O PORT (RS-232C)
3
DISPLAY UNIT
7
HARD DISK
15
TOUCH SCREEN CONTROLLER
1 TOUCH SCREEN UNIT
11 TOUCH SCREEN

FIG. 3

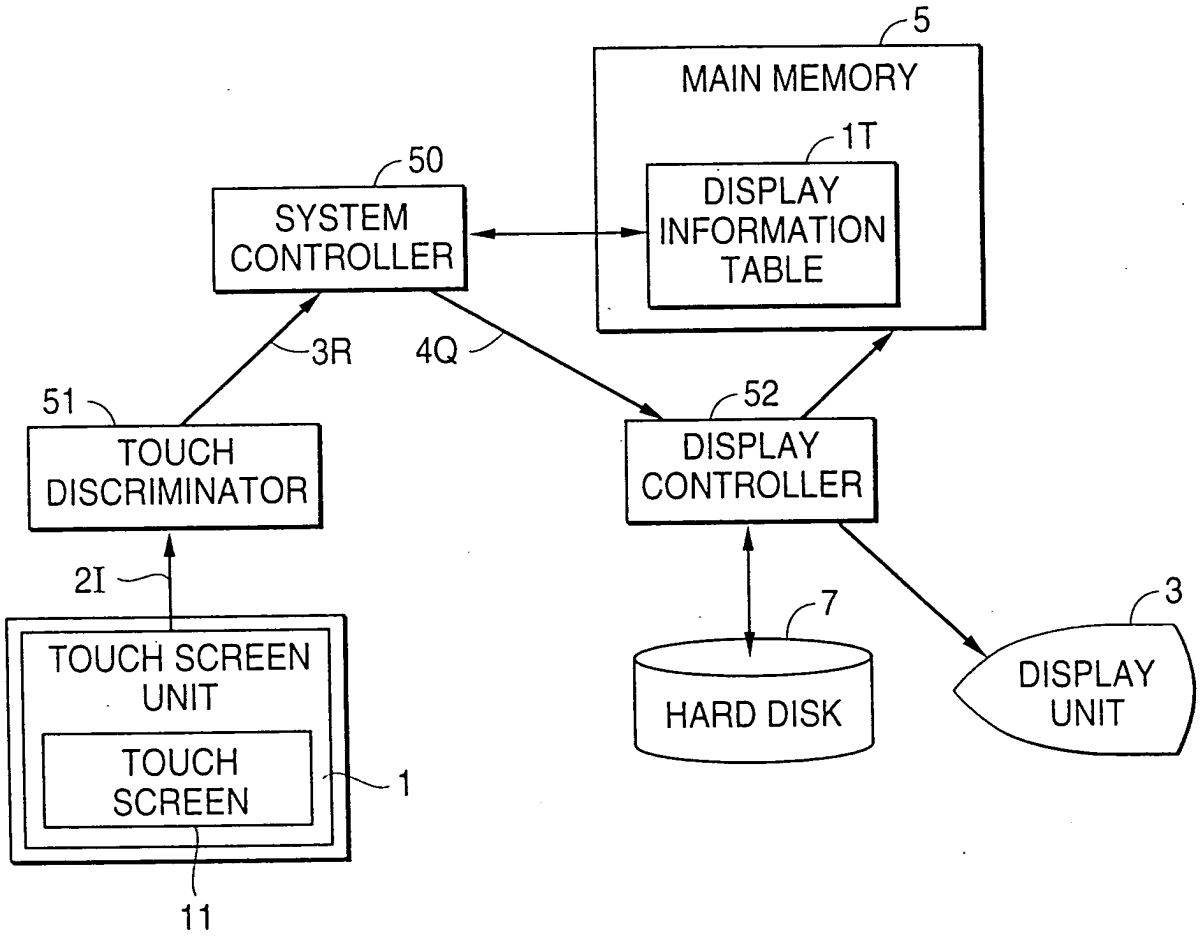
5
MAIN MEMORY
1T
DISPLAY INFORMATION TABLE
50
SYSTEM CONTROLLER
3R
4Q
51
TOUCH DISCRIMINATOR
52
DISPLAY CONTROLLER
2I
TOUCH SCREEN UNIT
TOUCH SCREEN
1
11
7
HARD DISK
3
DISPLAY UNIT

FIG. 4(a)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		

FIG. 4(b)

2I

		X-COORD (4 BYTES)	X-COORD (4 BYTES)	PRESSURE (4 BYTES)

FIG. 5

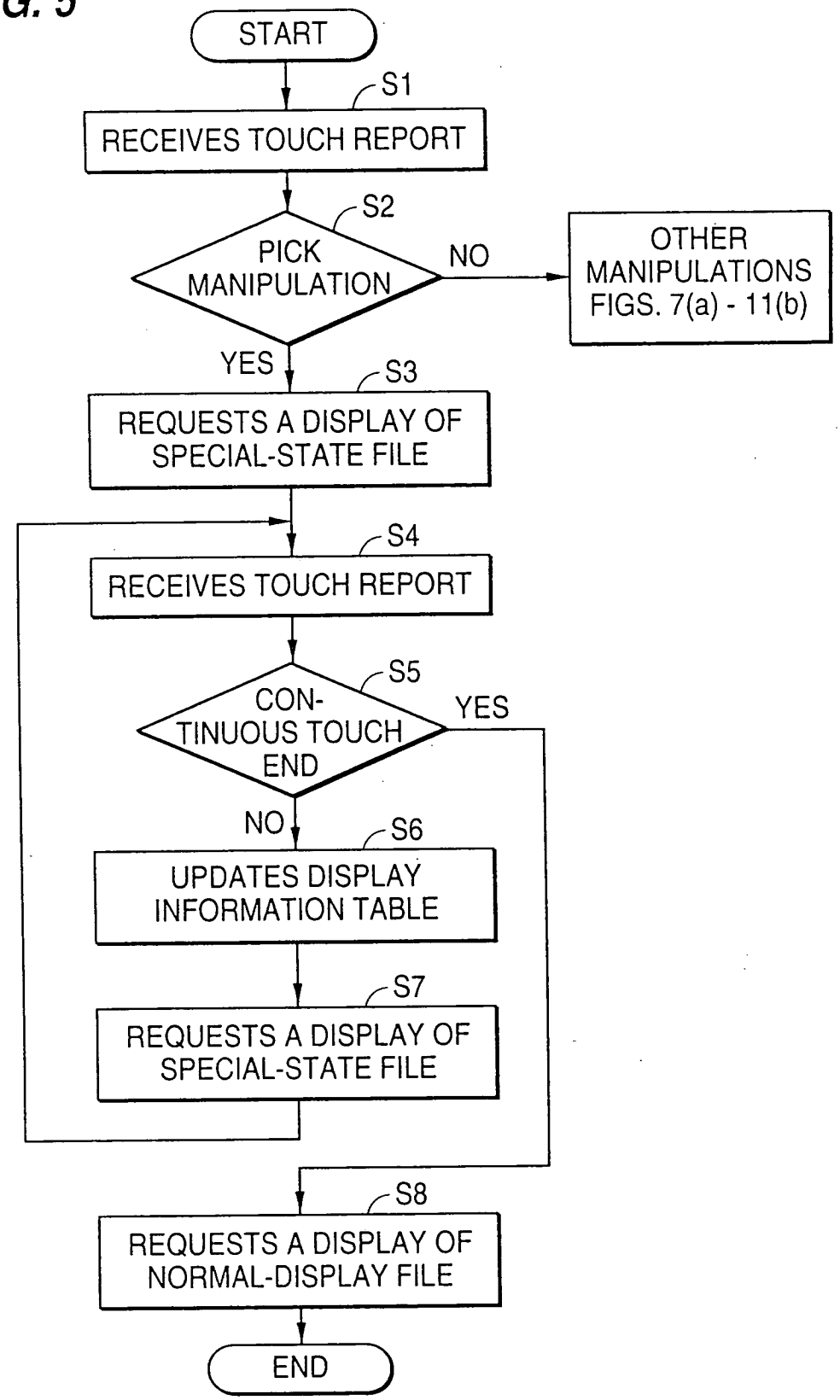
START
S1
RECEIVES TOUCH REPORT
S2
PICK MANIPULATION
NO
OTHER MANIPULATIONS FIGS. 7(a) - 11(b)
YES
S3
REQUESTS A DISPLAY OF SPECIAL-STATE FILE
S4
RECEIVES TOUCH REPORT
S5
CON-TINUOUS TOUCH END
YES
NO
S6
UPDATES DISPLAY INFORMATION TABLE
S7
REQUESTS A DISPLAY OF SPECIAL-STATE FILE
S8
REQUESTS A DISPLAY OF NORMAL-DISPLAY FILE
END

FIG. 6(a)

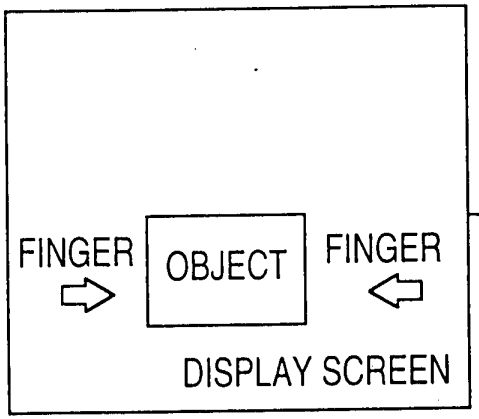

FIG. 6(b)

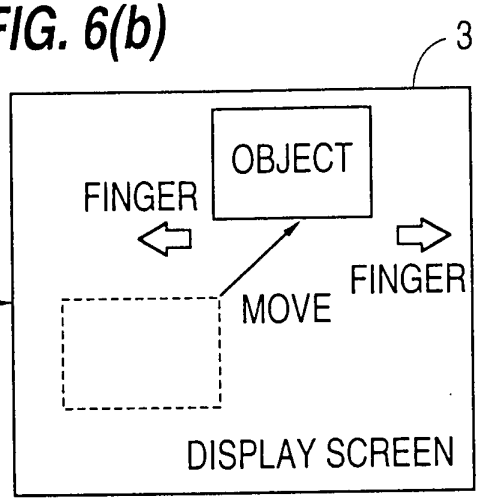

FIG. 6(c)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		
NORMAL	200	500	400	300	0	—	—	—	—	OBJ1	OBJ10

FIG. 7(a)

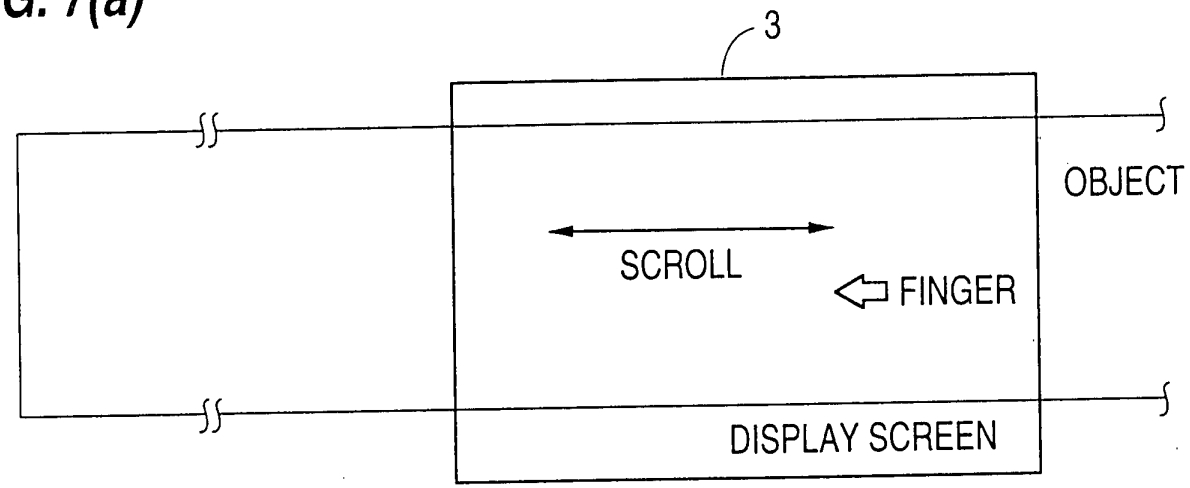

FIG. 7(b)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		
OUT-SCREEN	0	100	1152	700	0	3000	700	1000	0	BIG	——

FIG. 8(a)

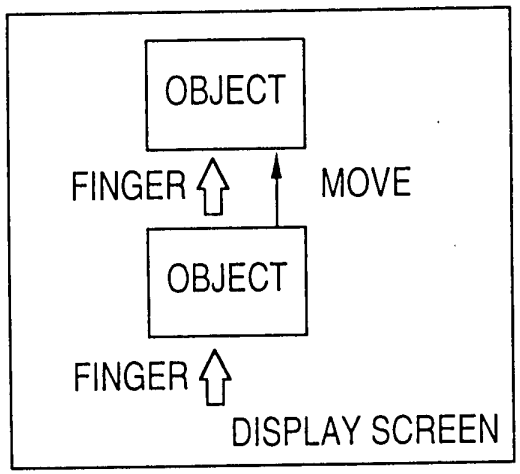

FIG. 8(b)

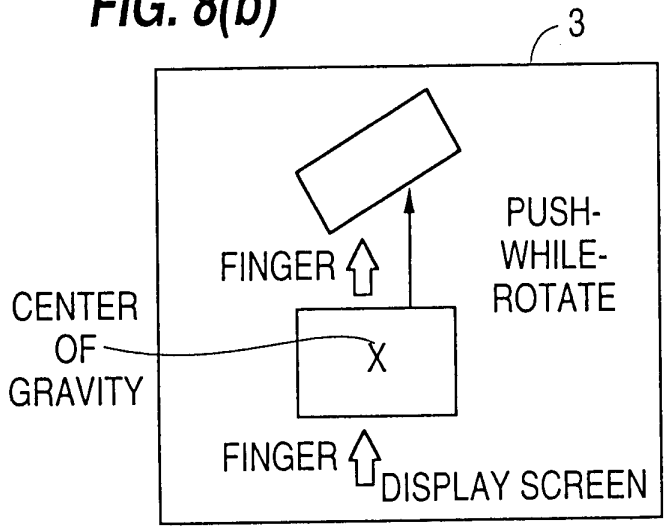

FIG. 8(c)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		
NORMAL	200	500	400	100	0	—	—	—	—	OBJ2	

FIG. 9(a)

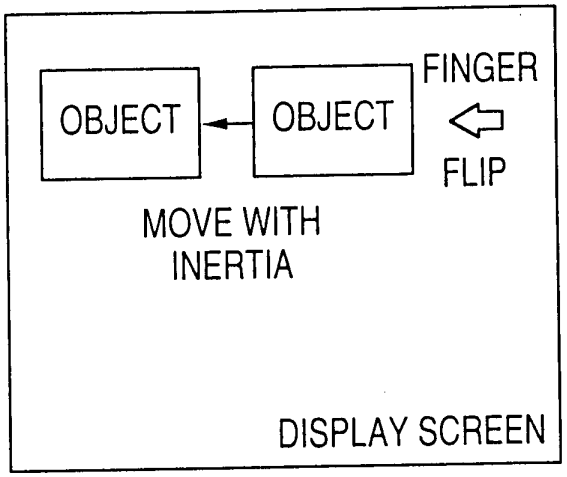

FIG. 9(b)

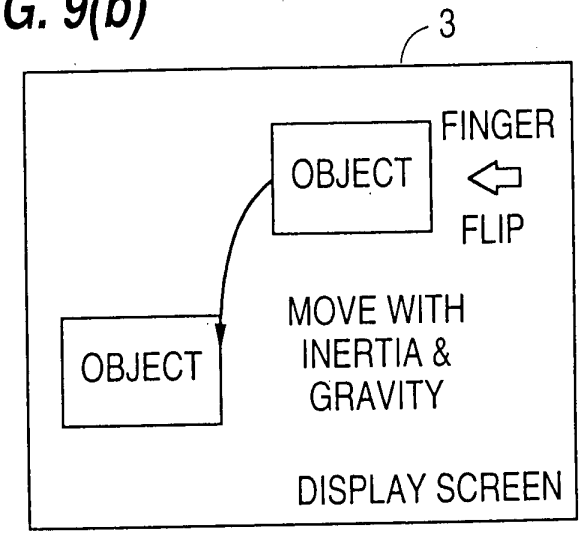

FIG. 9(c)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		
NORMAL	500	100	200	400	0	—	—	—	—	OBJ3	—

FIG. 10(a)

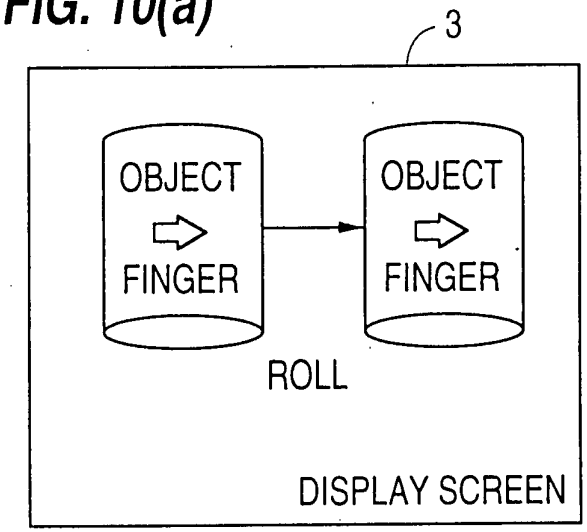

FIG. 10(b)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		
ROLL-ABLE	50	100	400	500	0	—	—	—	—	OBJ4	

FIG. 11(a)

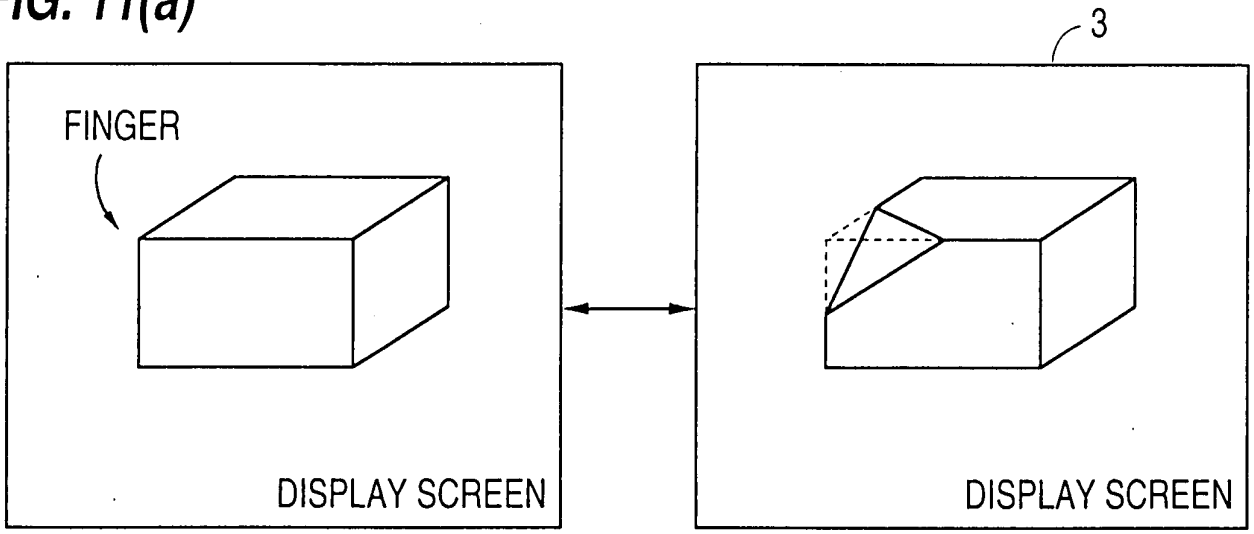

FIG. 11(b)

1T

OBJECT TYPE	DISPLAY POSITION INFORMATION					FILE INFORMATION				NORMAL DISPLAY FILE NAME	SPECIAL STATE FILE NAME
	TOP-LEFT COORD		SIZE		ANGLE	TOTAL SIZE		DISPLAY POSITION			
	X	Y	W	H		W	H	X	Y		
ELA-STIC	200	200	400	400	0	—	—	—	—	OBJ5	OBJ50